

ZIMBABWE'S AGRICULTURAL REVOLUTION REVISITED

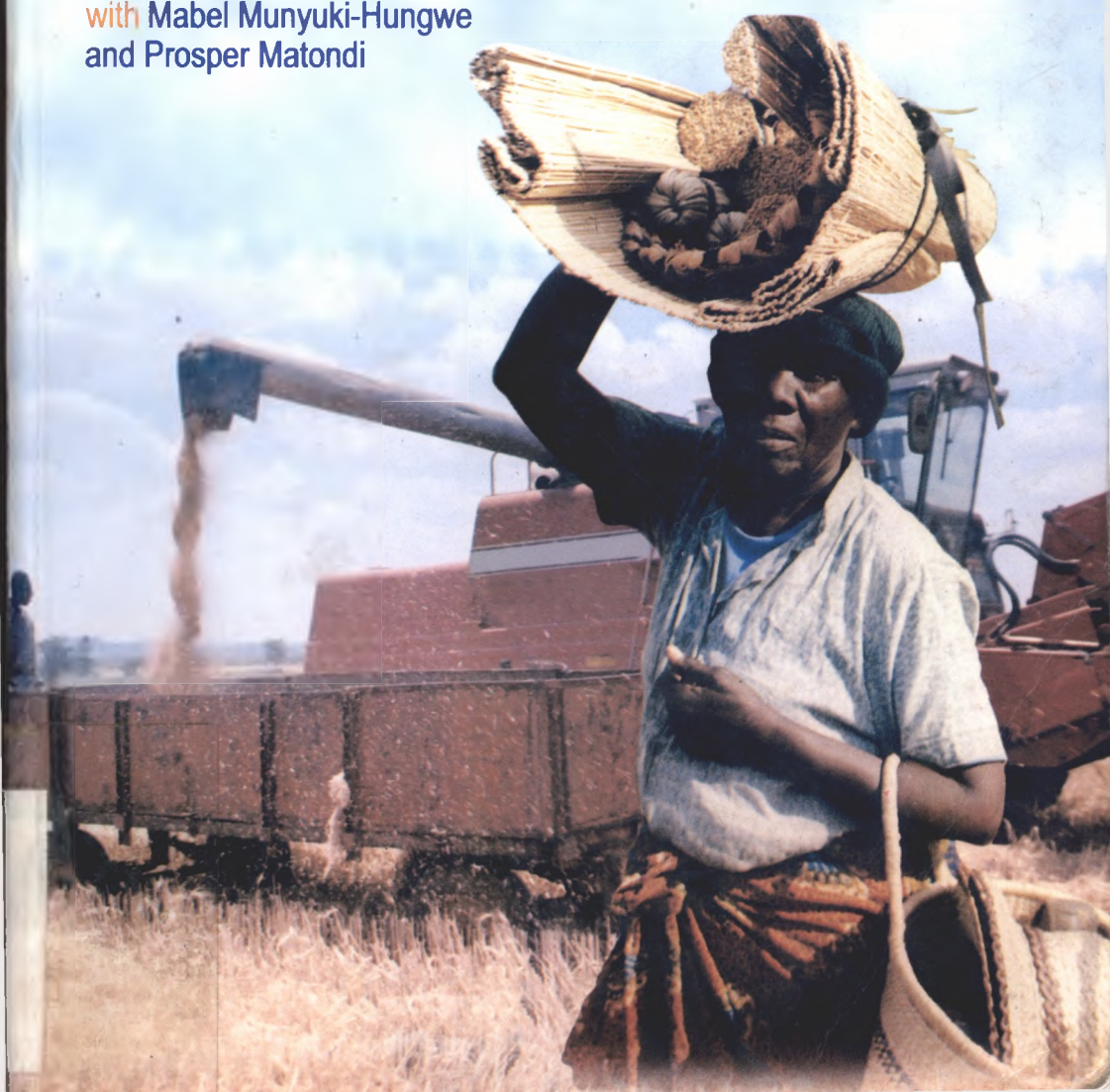
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Effective sustainable production of strategic crops will offset the need for food importation

Agricultural policies in a global environment

Kay Muir-Leresche and Chris Sukume

Globalization provides opportunities for significant growth. However, unless specific action is taken to ensure that the benefits of the more integrated markets are accessed, globalization will further marginalize poor economies. The reduction of subsidies and tariffs on agricultural commodities in industrial countries could result in increased exports from Zimbabwe but some countries in the west, notably the United States of America, have resisted removing subsidies to their farmers, even when they are at the forefront in demanding this from developing nations. This is the reality that faces developing countries and Zimbabwe suffers a double impact due to international (and particularly western) isolation as a result of its controversial land reform programme and over governance issues. In order to become active in the globalized market and to retain and expand national markets, local institutions need to be adaptable to changing demand and they must provide security and incentives for investment in biological, physical and human capital. Adequate access to markets and information through a reliable and affordable communications network is essential (Ingco and Nash, 2004).

National policy making, choices and priorities have had an impact on the development of Zimbabwe. Macro-economic policies such as exchange rates, inflation, interest rates and fiscal policies directly impact on the ability of the agricultural sector to respond to international demand. In Zimbabwe the economic structural adjustment programme of the 1990s made some progress in developing more flexible and responsive institutions but poor sequencing and lack of commitment undermined these achievements. The 1990s saw significantly reduced investment in social services, human capital and agricultural research and extension. The fast track land redistribution exercise in 2000 and Zimbabwe's isolation from the west makes recovery for the economy and agriculture even more difficult. A review of the strengths and weaknesses of the structural adjustment programme in relation to agriculture will help to inform the way forward. There are, however, many opportunities for the agricultural sector to be re-engineered to take advantage of agricultural trade liberalization, new technologies, changing demand, regional agreements and the global economy.

This chapter recaps the history of macro-economic policies, discusses the key drivers for change and analyzes the prospects for the third agricultural revolution.

Historical overview of macro-economic policies and agriculture

In the first decade of independence, there were significant investments in human capital and infrastructure with a strong emphasis on education, health and roads, particularly in the communal and resettlement areas. However, challenges to the status quo were discouraged by slow changing institutions and attitudes. One dimension was the immobility of land which affected the ability of agriculture to respond to the changing environment and political necessities. Problems of access to foreign currency and the import control regimes reduced opportunities for investment and growth in the productive sectors. In the midst of the large smallholder gains in the production of maize in the early 1980s, economic distress started to emerge. The disappointing economic growth record was primarily the result of the inherited system of centralized controls. In addition, concerns with increasing government budget deficits,²⁰⁶ high unemployment and poor growth rates led to the implementation of a structural adjustment programme with changes to the foreign exchange allocation system starting in 1989 and the formal acceptance of the economic structural adjustment programme in 1991.

Changes were made with the conversion of many quantitative trade restrictions to tariffs and the centralized agricultural marketing system, interest rates, exchange rates and the banking system were liberalized. However, government expenditure continued to escalate. There were attempts at increasing revenue and placing some restrictions on government expenditure but these reductions were concentrated on health, education, extension, research and other important government service sectors while expenditure on the military and loss-making parastatals increased during the 1990s. Not only did these expenditure patterns distort the fundamental balance of the economy, they also served to seriously undermine confidence in the government and significantly reduced both local and foreign investment. There were various *ad hoc* attempts to attain expenditure targets but to achieve these, the social (particularly health and education) and productive sectors were sacrificed. As a result the gains in both education and health were eroded, agricultural services to smallholders remained inadequate whilst infrastructure deteriorated.

Profligacy, lack of commitment and economic rents were the main cause

²⁰⁶ The national debt was 70 per cent of gross domestic product in 1989 with an annual budget deficit of 10 per cent.

of the failure of the economic structural adjustment programme in the 1990s. However, the droughts, declining terms of trade, the Asian currency crisis in 1998, the failure of the Hartley platinum mine, the continued losses from ZISCO and the collapse of the United Merchant Bank all contributed to the poor results (Muir-Leresche, 1998).²⁰⁷ Despite these setbacks, there were some positive effects from the partial deregulation. There was a significant increase in informal sector activity, particularly with the liberalization of agricultural marketing and foreign currency controls. Zimbabwe's informal economy grew rapidly and became a major contributor to growth and employment. In the mid-1990s the normally compliant farmworkers challenged employers over wages and conditions of service because they had employment opportunities in the informal sector. The massive response to deregulation of the maize industry increased both growth and equity. Small rural and urban millers and oil expressers started competing with the conglomerates. This response would not have been possible without the liberalization of access to foreign exchange and reduction of tariffs on vehicles and machinery.

In terms of economic performance there was an average 2.8 per cent real growth in gross domestic product between 1992 and 1998. There was a fall in national income after the 1992 drought and a small drop in 1995 but in all other years there was positive growth until 1999. But by 2000 the macro-economic position in Zimbabwe was considerably worse than it had been in 1990. This was also reflected in the incidences of poverty, as the percentage of the population classed as poor increased in the post-independence period and particularly in the 1990s. Two major surveys (Income and Expenditure Survey and Poverty Assessment Study) conducted in 1995 showed the proportion of the population classed as poor to have been in excess of 60 per cent.

Reflecting these poverty trends, in 1999 national growth fell by 1 per cent and the economic situation thereafter deteriorated with negative growth rates estimated at -5 per cent, -10 per cent and -15 per cent in 2000, 2001 and 2002.²⁰⁸ Gross domestic product in 2001 was estimated at Z\$488 billion dollars. Domestic debt was just under 50 per cent of gross domestic product and foreign debt of some US\$4 billion was 50 per cent of gross domestic product at the official exchange rate but 600 per cent at the parallel market rate. Savings in 2001 fell below 10 per cent of gross domestic product with high inflation and

²⁰⁷ The 1992 drought made it impossible for government to meet its original targets although the counter-factual scenario of the economy facing the drought without having taken measures to decontrol the economy, may have been worse. The 1995 drought further undermined the economy.

²⁰⁸ Most data are drawn from the Central Statistics Office and the Reserve Bank of Zimbabwe but the estimated growth rates are based on those predicted by various commercial bank economic reviews. Government sources vary between predicting a 7–10 per cent decline whereas some economists predict as high as -20 per cent.

interest rates held low to reduce debt servicing.²⁰⁶ The foreign reserves were enough for seven months in terms of imports in 1999 but had fallen to three days' worth by June 2002. There was no foreign currency available at official rates even for imported inputs so all foreign currency, except that used by government, had to be sourced above the official rate. Many prices reflected the parallel market rates, lessening the potential inflationary impacts of devaluation. Inflation was 20 per cent in December 1997, 47 per cent in December 1998, 112 per cent in December 2001, 123 per cent in 2002 and 216 per cent in January 2003, without taking account of parallel market prices for scarce basic commodities. This reached a peak of 626 per cent before the monetary policy measures instituted in December 2003 led by the Reserve Bank of Zimbabwe. The inflation then dropped to around 326 per cent in July 2004. Inflation, limited access to foreign currency, high unemployment and uncertainty all contributed to declining agricultural growth. Declining agricultural output in turn contributed directly to reduced national growth and a further deterioration in these variables, such as food security, foreign currency generation and employment creation.

The Zimbabwean economy and agriculture in particular declined sharply in the early part of 2000. In the smallholder sector, late payment to producers, poor prices and marketing controls on maize reduced planting and contributed (together with the land disruptions and the 2002 drought) to the decline in output in 2001 and 2002. When the political and economic situation stabilizes, the recovery of the agricultural sector will be a key component to successful development of Zimbabwe. Some of the opportunities and policies that could release agriculture's potential as the engine of growth are outlined below, together with the opportunities presented by globalization.

Opportunities and challenges of the new millennium

New and indigenous technology

Advances in communications have made global integration possible. Modern communications and technology have reduced transaction costs and political and social barriers which made this difficult in the past. In order to ensure active participation, Zimbabwe will need to encourage investment in developing the research capacity, information and communications infrastructure to access available knowledge and markets, and leadership and farmer capacity. An added advantage is that these investments in rural infrastructure and market development would facilitate links with the non-farm sector, stimulating over-

²⁰⁹ Production and marketing of agricultural commodities declined by an estimated 20 per cent in 2001, in a season of relatively good weather. This fall in production was compounded in 2002 by poor rains increasing the urgency of food imports.

all income and employment in both rural and urban areas and leading to additional demands for agricultural products.

Biotechnology has become more widespread but scientific controversy still surrounds genetically modified seed. India, the United States of America and many other large agricultural producers have made significant progress in increasing productivity through the use of biotechnology. However, any widespread adoption of genetically modified seed might put at risk Zimbabwe's trade with the European Union which has strict regulations preventing the imports of genetically modified commodities. The new agricultural structure and the loss of capital and skills may change comparative advantage and reduce the risk to agricultural exports of using genetically modified seed.

The beef herd is unlikely to recover – returns to cattle ranching are low and cattle in smallholder systems are more profitable as a store of value and as inputs to the cropping system. It may, therefore, not be important that genetically modified maize is used to feed cattle if beef exports to Europe are no longer significant. The important point is that attitudes and policies must be re-evaluated in the light of the changed structure. It may only be in the horticultural industry that strict regulations and enforcement are necessary to retain export markets. Research into biotechnology needs to be expanded so that Zimbabwe can assess the health and market risks as well as the benefits of adopting biotechnology and then, if appropriate, take advantage of the higher yields.

Organic farming is becoming increasingly important in industrialized countries. The organic produce market is valued at US\$400 million in California and throughout the United States of America it has been growing at 20 per cent per annum in supermarkets and in the United Kingdom the official government target is that 20 per cent of the food consumed will be organic by 2010 (Clay, 2001). Smallholder farmers are well positioned to compete in these staple markets. There is also some scope for increasing traditional agricultural exports (for example, coffee, tea, cotton and sugar) but primarily through trade negotiations as well as through improving quality and capturing niche markets, such as organics (Diao *et al.*, 2003). The lower use of imported fertilizer, pesticides and herbicides are suited to smallholder systems. However, it is skill-intensive with high management demands. Research, training and implementation of appropriate systems for organic farming in the smallholder sector need to be encouraged. The existing permaculture and other organic farming institutions need to be expanded. Certification will play an increasingly important role both in ensuring the integrity of conventional commodity exports and in accessing the expanding market for organically produced commodities. Credible research and certification institutions need to be established and investment in training and retaining the necessary human capital for agricultural research is essential for Zimbabwe to participate effectively in the global economy.

Zimbabwe's agricultural sector will not be able to rely on skills-intensive

and high-input technology because of foreign exchange shortages, reduced capital and limited access to credit in the former large farm sector, as well as the changed structure of agriculture (Muir-Leresche, chapter 4). It therefore becomes even more important for investment in research into indigenous knowledge and the development of best-bet technology that combines traditional and modern science. Intercropping, rotations, agroforestry and other systems that produce relatively high yields at low cost using local inputs suited to small-holder agriculture need to be encouraged. A review of optimal cropping patterns showed that viability assessments normally include only the principal crops produced in any one field. In these studies maize would frequently show lower returns than cotton, groundnuts and other commodities. However, when the value of the produce from the commodities intercropped with maize was included and the maize retained for home consumption was valued at its purchase price, then in many instances the farmer's choice was optimal. If a risk premium is added for the uncertainty of the maize market, then maize was the rational choice even where it was not viable to produce relative to other crops such as horticulture, cotton or sunflower. Interdisciplinary research which combines biological, social and economic factors and which closely involves small-holders will be an important component of successful research blending modern and traditional science.

Indigenous fruits, vegetables, edible insects and small mammals all have potential to significantly increase livelihoods in particular communities. Research into the sustainability and expansion of the production of these commodities needs to be combined with investigations into the markets. The use of *dambos* (wetlands), water-saving and low-cost water harvesting technologies needs to be investigated by combining traditional methods with low-maintenance modern technology. It is also important to analyze the impact of these activities on the environment and to balance short-term and long-term effects.

These small-scale interventions are by definition only applicable in localized situations. The farmers themselves will need to undertake the experiments. They are not in a position to take risks and the government and donor agencies could cover the capital costs and modern skills for the adaptation of best-bet technologies to local conditions, while the farmers provide their labour and traditional skills in testing and expanding their use. The inputs provided would act as payment to the farmers for the labour and land they allocate to research, rather than be deemed subsidies. Widespread implementation of farmer-led, process-based research could be used in place of conventional input subsidies and grants (Mann, 1998). The farmers should be contracted and monitored with both their rights and responsibilities clearly articulated to avoid dependency, reduce moral hazard and provide incentives for good practices. Any successful interventions are then likely to spread as farmers decide which practices are most suitable.

Demand for agricultural and agro-industrial commodities

The terms of trade inevitably turn against agriculture in wealthy countries and to a lesser extent in the international arena, given that most demand for agricultural commodities is income inelastic or negatively correlated to income. However, if the poor countries were to grow rapidly in the short to medium term, there would be an increase in the demand for agricultural commodities as people initially respond to increasing incomes by increasing and diversifying their diets. The low-value, high bulk nature of basic foodstuffs and Zimbabwe's landlocked status and distance from markets preclude a strategy based on increasing incomes in poor countries. Zimbabwe needs to develop production and natural resource use patterns that focus on high-value, low-bulk, and luxury commodities that will meet the demands of the rich in industrialized and emerging economies.

A key strategy for generating foreign currency through exports is to structure production towards demand and opportunities presented in richer markets. The export of conventional value-added luxury products for Europe and America such as horticultural commodities and handicrafts provide the greatest opportunity. In a context of environmentalism and climate change in the north, environmental 'goods' (carbon sinks, species diversity, existence and bequest values, and so on) and innovative tourist ventures involving rural areas are becoming more critical. This is an area which needs to be expanded and wildlife production in the dry areas may need to be reintroduced. The emerging economies, particularly in the Middle East, Asia and Eastern Europe, provide unexplored options. These markets need to be actively investigated and opportunities for servicing them need to be researched. Government needs to facilitate citizens to actively participate in these markets with value-added products.²¹⁰ The multiplier and employment effects would be greatest if the exported commodities were processed in the rural areas. However, this is not always appropriate or possible and careful assessment of current and potential comparative advantage must be made to ensure that export markets are not lost in a drive to add value.

Opportunities for continental and regional trade in agricultural products depend on significantly improving communications in Africa. The increasing sophistication of markets and demand in West Africa, Uganda and Tanzania, provide opportunities for processed agricultural commodities. Many of these

²¹⁰ There are a number of initiatives such as the export of meat by Farirayi Meats to Libya, women's roundtable participation in trade in Mauritius, Malaysia and exports to the Democratic Republic of Congo. These initiatives need better and mass publicity so that all citizens participate in exporting products to these markets. The monetary authorities could also provide incentives in the form of productive support facility loans for citizens to compete with established companies.

countries rely almost exclusively on imports of juices, jams, preserved fruit and vegetables, cereals, and so on, from Europe (particularly from France). South Africa has been effective in penetrating these markets and Zimbabwe needs to ensure that it also competes. Within the southern Africa region, natural conditions are often similar and it is difficult to use neighbouring countries as part of a regional maize-security strategy. Nuppenau (1994) showed, however, that intra-regional trade in the Southern African Development Community can soften price increases in the case of severe drought. In some cases, areas such as the Eastern Highlands of Zimbabwe and parts of Mozambique may be better integrated with markets in neighbouring countries than with domestic ones. Since cross-border exports may not be subject to the same level of stringent quality standards required for international markets, intra-African trade might be more accessible to smallholders (Peacock *et al.*, 2004). Yet in order for smallholders to better integrate into the emerging supermarket distribution system, greater effort is needed to reduce transaction costs and improve efficiencies along the supply chain.

Greater cross-border trade in food staples could also help stabilize food supplies and prices at subregional levels in drought years. Access to regional markets, particularly the South African market for livestock, dairy, textiles and other agricultural commodities, are limited by qualitative, quantitative and tariff barriers. These need to be addressed in the light of the favourable trade status for the European Union, making it difficult for regional countries to compete with subsidized European commodities. The political uncertainty in Zimbabwe has resulted in the loss of capital and skills to neighbouring countries and active steps will be needed to attract processing, service and transport companies back to Zimbabwe.

Partnerships and the international environment

In order to participate in the benefits of globalization, Zimbabwe needs to become an active participant in the forums which affect trade, aid and social capital. The World Trade Organization has been more active in articulating developing country issues since the ministerial meeting in Qatar in 2001. The Doha agenda explicitly dealt with key concerns of developing countries, including capacity building, market access and intellectual property rights (Hertel, Hoekman and Martin, 2002). The discussions highlighted some of the anomalies in agricultural trade and the importance of the removal of distorting internal subsidies. Progress, particularly in the United States of America, Europe and Japan, has been slow. A much more active drive to gain effective access to these markets is required. The reduction of subsidies and tariffs on raw and processed agricultural commodities in industrial countries will provide opportunities for increased exports from Zimbabwe. Qualitative barriers relating to health, environment and social welfare should be open and achievable and not

implemented to protect industrial countries from developing country exports. Zimbabwe needs to join with other developing countries to lobby for the progressive liberalization of trade on a non-discriminatory basis, ensuring that rules are consistent with development of poorer countries and in obtaining assistance for the implementation of World Trade Organization obligations in developing countries.

The New Partnership for Africa's Development (NEPAD) emphasizes good governance and self-monitoring in Africa and the reduction of unfair practices in rich countries. It is designed to enhance trade and encourage economic growth in Africa, which promotes the ideals of pan-Africanism that Zimbabwe strongly espouses. One of the objectives of the partnership is to assist in allowing Africa to increase its access to international communication and knowledge and to find ways to reduce the increasing gap created by those without effective access to modern technology. Zimbabwean agriculture will benefit from active participation in such initiatives.

Zimbabwe will either have to renege on all its international obligations or seek assistance from the international community to resuscitate the economy and address its debt burden. The economy is unable to function when over 10 per cent of its gross domestic product is required for interest payments alone. The country will need to attract international capital and aid. In order to encourage investment it will need to reassure private investors that their capital is safe. The emergence of a strong civil society needs to be encouraged in order to build a national consensus for change which will provide investors with more security than conditionality (Collier, 2000). Bilateral and multilateral aid most often strengthens central government by making the society increasingly beholden to those in power for access to both resources and essential services. It will be important that the aid is structured in such a way that it empowers communities and does not undermine devolution. It needs to actively promote transparency, reduce moral hazard and promote the policy and institutional changes necessary for poverty reduction and growth.

Policies to promote agricultural growth, diversification and trade

In order for a liberal government to operate efficiently, there must be a liberal and free society allowing entrepreneurs to prosper. A market economy cannot operate in a closely regulated society that does not encourage innovation by its citizens. Systems are only efficient if they operate in an environment of norms and regulations which are widely accepted by the citizenry and leadership. Political will, both in civic society and in government, is needed if markets are to effectively allocate resources. To be widely accepted these changes have to make provision to address poverty and equity. If liberalism looks to the market to maximize social welfare but also includes the notion that individuals have a wider responsibility to humanity, then it will have to find effective ways for the

gains from market reform to reach a broader spectrum of the population.

The pursuit of individual welfare maximizes social welfare at the given income distribution level, provided there are no market imperfections. However, when signals at the macro level are distorted during depressions and inflationary spirals, the good of the individual and that of society are often in direct conflict – with consumers spending when the economy would be better served by saving, and vice versa. This, together with market imperfections, is used to justify widespread and conflicting government intervention in macro variables. These interventions, however, become self-defeating and with the economy operating so far inside the production possibility frontier, both growth and equity can be better served by their removal.

With high inflation, high unemployment, low savings, high debts and no foreign currency, there are strong arguments for an abrupt approach to structural adjustment. The main problem with the gradual approach is that the economy remains in disequilibrium and sequencing, rent-seeking and social pressures can undermine the effort to re-establish a vibrant economy (Muir-Leresche, 1998). The new economy will need to ensure that it encourages institutions, norms and regulations which are flexible and encourage investment. The policies need to address equity, growth and environmental sustainability. Good governance underlies the ability of an economy to function efficiently.

The government debt is a major factor in the disequilibrium. Reducing the government budget deficit is essential and an important corollary is the direction of government expenditure. There is an urgent need to reinvest in health, education, infrastructure, research and extension. These sectors have been seriously undermined in the 1990s which, combined with the effect of HIV and AIDS, could have negative long-term consequences from which the economy may take longer to recover. They are however insufficient on their own to ensure long-term growth. Even if monetary and fiscal policies are revised to reduce inflation, there still remain a number of areas where the institutions restrict resource mobility, discourage innovation and distort economically rational choices. In addition the economy can only recover when faith in the system is restored in order to break the inflationary spiral and change spending and savings patterns.

There are also a number of areas that were initially liberalized but have since been recontrolled, undermining the earlier gains. The high import duties, particularly affecting transport, and the potential for private sector response to the liberalization of rural markets must be addressed. In addition the managed exchange rate and the reintroduced restrictions on foreign currency have combined with increasing inflation to seriously undermine the competitiveness of Zimbabwean exports. The 2004 exchange rate regime heavily taxed agriculture as it made it uneconomic for farmers to produce both import substituting and export commodities.

Bautista *et al.* (2002) simulated the impact of trade liberalization in Zimbabwe and showed that it increased the aggregate income by 4 per cent. They show a marked increase in exports and imports but also reflect a potential negative impact on equity from trade liberalization alone. They show more gain to the large-scale sector, since the smallholder sector is not heavily involved in exports. This also indicates a vent for surplus which smallholders could exploit, provided they are able to acquire the skills and capital. Since the study there has been an increase in smallholder participation in export crops, particularly cotton, horticulture (especially paprika), groundnuts and tobacco.

These emerging smallholder commercial farmers are being negatively affected by the control of the exchange rate and by a sharply appreciating real exchange rate. Mehлум (1998) shows that the short-term consequences of devaluation negatively affect unskilled workers' real wages but as most of these effects have already been transferred through the parallel market for foreign currency, the short-term consequences will be lower. The impact will primarily be felt through fuel and electricity prices which have been determined at the official exchange rate. Moving the exchange rate to equilibrium is an essential condition for re-establishing macro-economic stability but it will not be effective without a secure environment for investment and export expansion.

Institutions and governance

Agricultural development is part of the broader transformation of society to include more than allocative and economic issues. Stiglitz (1999) argues that only 'broadly participatory processes (voice, openness and transparency) promotes long-term development'. In order to be effective, agriculture requires an environment which encourages investment by small and large farmers and by those with access to skills and resources and by those with limited access. Agriculture, farmers and rural entrepreneurs, the poor and the rural population in general need to find effective mechanisms to actively participate in policy and decision-making processes. Rural communities need to be in a position where they are able to hold responsible authorities accountable for their actions and to lobby for policies favourable to rural development.

Property rights

Evidence from throughout Africa highlights the essential role played by secure property rights in ensuring both sustainable development and good governance (Turnham, 2000). While the state has allocatory power over key resources, such as land, people may not be able to demand accountability of the state. Rukuni (1998) has shown that successful tenure is not predicated upon the type of tenure but on the security of the basket of rights. The communal areas act as Zimbabwe's social security net and as such individual property rights tend to

be fuzzy. However, the allocation of *de jure* rights at village or community level is essential to encourage rural investment, sustainable use and to promote civic participation in government. While the state retains legal rights to resources, rural people cannot take control of their own lives and this reduces incentives to allocate resources sustainably. It makes it difficult for them to hold authorities accountable for their actions. The heavy presence of the state, local authorities and traditional leaders in resource allocation tends to create confusion leading to resource inefficiencies.

Individual property rights in the resettlement areas are appropriate, particularly as these are not closely connected communities. If the state continues to own all land in old resettlement areas and new A1 and A2 schemes, then the redistribution is unlikely to become an engine for growth, even if farmers have been provided with support services that are heavily subsidized. Legal and perceived property rights must be secure in the resettled areas to encourage sustainable use of resources. Secure property rights will encourage investment and allow a market to develop for land which is accessible to the majority of Zimbabweans. Such a land market encourages investment and the development of asset value. It could provide substantial gains to both equity and growth.

In the large-scale sector that includes A2, remaining large-scale farms and plantations, the size of landholdings must be free to respond to market forces, with incentives to encourage broader participation in commercial agriculture. The land must be taxed depending on size, quality and potential use reflecting its value to society but it must avoid increasing the transaction costs of subdivision. If the state acquires and resettles large tracts of large-scale farmland, without allowing the remaining holdings the flexibility of subdivision, the highly skewed land structure will remain even if there is greater racial equity. Bautista *et al.* (2002) have shown that taxing land and encouraging subdivision results in significant increases for both growth and equity. Existing commercial production is relatively unaffected and smallholder production increases on the land formerly unused. If a resuscitation of agriculture includes re-establishing large farmers, it is important to accompany this with maximum flexibility in land size and investment in developing an active land market. The security of private property rights will need to be re-established before significant investment and full-time farmers are attracted back to the sector.

Devolution, decentralization and civic participation

Urban élites, by organizing, centralizing and capturing political and economic power, have been able to control policy and the distribution of resources. Africa's failure to achieve higher levels of development has been partly due to the lack of open and participatory political systems and the lack of well-articulated competitive institutions. It has also resulted from highly centralized political, fiscal and institutional systems for rural development. 'These high levels of

centralization inhibited the development of institutional capacity at local levels, limited local resource mobilization, undermined accountability of development programmes to local populations and inhibited their participation' (Binswanger and Townsend, 2000:1078).

Zimbabwe will need to put in place systems and institutions which empower local communities to take the initiative in their own development. Decentralization will need to be more than establishing central representatives in rural areas. It needs to ensure that both responsibilities and resources and the power that go with them are effectively devolved to local levels. The process needs to be accompanied by training in management and accounting and the establishment of transparent and accountable resource allocatory systems. Minimizing regulations and encouraging the establishment of competitive small enterprises will reduce the moral hazard facing local élites with increased and unchecked power.

Uganda has decentralized services and is providing districts with the resources to employ extension workers and hold them accountable to the farmers they serve. The Latin American experience indicates that despite the selective modernization of agriculture and increasing social differentiation, the emergence of greater civic participation in economic and social affairs has had a positive impact on development. An 'explosion in the number of producer, grassroots and non-governmental organizations' has opened opportunities in responding to globalization while preserving local culture and community relations. These organizations play an important role in lobbying government, servicing the informal rural sector and small farmers and as advocates for human rights and environmental protection (de Janvry *et al.*, 1997:34). In Zimbabwe, local government needs the authority and resources to provide public services. They need to obtain state grants, raise revenue locally and to be able to allocate secure rights and provide services to local resource users. Avenues for rural investment need to be opened to encourage rural development.

Encouraging competition and discouraging monopolies

The decontrol of agricultural markets had many positive impacts for both the large-scale and small-scale farmers and for poor urban households. The reforms reduced the cost of marketing by expanding small trading and milling networks to reduce marketing margins (Jayne and Jones, 1997). The recontrol of the grain markets in 2001 will need to be reversed and the small millers and traders re-established. However, even before the recontrol, there remained many barriers to entry and marketing margins and transaction costs were particularly high in rural areas with poor communications. Regulations in urban areas still favoured established operators and industry concentration in agricultural marketing, processing and input supply remained high, undermining competition and resulting in inefficiencies and high prices. Existing regulations need to be

reassessed and measures put in place to actively encourage new entrants, to reduce transaction costs and to increase the security of maize markets.

Economic rents are the result of either monopoly or regulatory power or both. They underpin efforts to undermine liberalization and encourage an alliance (usually unacknowledged) between some or all of big business, large-scale farmers, organized labour, organized crime and government, in an effort to retain opportunities for rents. If development is to result in flexible institutions which discourage corruption, then it is important to invest in the development of small-scale business and family farming. Where there are economies of size, larger entities should be able to emerge; the key is to allow the structure to emerge in response to the scarcity and abundance of resources and to continue to respond as development changes these realities. The organic development strategy endorsed by Kornai (2000) emphasizes the growth of a new private sector and uses privatization of state monopolies to encourage entrepreneurs. Encouraging competition is the key to broadening participation in the economy, increasing producer prices, reducing input and consumer prices and, in the process, optimizing growth and equity. It also reduces opportunities for corruption, reduces transaction costs and empowers people to take advantage of changing circumstances.

Policies to promote rural development

Transforming the economy requires active steps to promote competition in order to allow prices to effectively allocate resources. Lower transaction costs, access to finance and access to vehicles and processing equipment appropriate for small enterprises, are essential to the successful transformation of Zimbabwean agriculture and rural industrialization. Agriculture is the backbone of rural development. In order for it to achieve this, however, the multiplier effects from agriculture need to remain in the rural areas. There are strong multiplier effects from smallholder growth which justify investment in infrastructure, research and training to service this sector.

Agrarian reform

The changes to the agricultural sector (1999–2003) make it even more important for government to establish secure and effective institutions and to invest in capacity-building, research and communications. It needs to release smallholder potential by developing an enabling environment for expansion. It is important that the short-term crisis does not prevent investment in long-term viability. Policies to promote food production need to take into account comparative advantage and expanding the informal food distribution network. In order to encourage production of export commodities it may be necessary to encourage partnerships and strategic alliances as the new A2 farmers and small-

holders have limited experience with these commodities. This will help to raise capital and provide expertise but will reduce the independence of the new farmers.

A renewal of agriculture in Zimbabwe will require assistance directed to resource users and not central government. Having state institutions such as the Agricultural and Rural Development Authority competing with farmers for access to finance and imported agricultural equipment will be detrimental to empowerment of new farmers. Scarce resources need to be directed (by those most affected) to their best options and there needs to be innovation in establishing institutions that reduce opportunities for rents and patronage. There will be the need for massive investment in capacity building. An adaptation of 'hedge schools' may be appropriate, where trainers move from community to community providing instruction and advice at regular intervals. These field days could be coincided with the provision of other health and veterinary services so that communities are able to expand their exchange systems and develop periodic markets, similar to those in West Africa. It would also reduce the transport costs of providing the services. Every effort needs to be made to encourage the emergence of rural traders and small-scale manufacturing so that the multiplier effects of increased agricultural production are captured in the rural areas.

The new A2 settlers, who may receive the majority of the land acquired, will also require training and an enabling environment. They will need the ability to subdivide and sell land in order to generate the capital needed to farm productively. That remains relevant should the issue of land tenure be clarified beyond just leases. An effective land market will encourage investment in both environmental integrity and productivity. Central government does not have the capacity to enforce environmental safeguards and local institutions will take time to develop. It is, therefore, essential to ensure that as far as possible individual incentives promote sustainable land-use. A land tax system will be needed to reduce landholding for speculative purposes.

Physical infrastructure

Africa's widely dispersed population, low productivity and low literacy levels combine to make it unattractive for private sector investment in infrastructure. Without the infrastructure it is difficult to improve productivity and incomes. Specialization within communities and between communities leads to increased output but is only possible with communication. A market economy is only as efficient as the communications network (transport and information) allows it to be. Well-integrated markets that reduce market risk also require effective storage and exchange systems with competition and low transaction costs. Access to safe water, education, health, veterinary, research, extension, commercial and financial services are all affected by communications, particularly roads. Energy also plays an important role in sustainable growth and in access to

communications. In many remote areas electrification is not a viable option, making research into solar energy more urgent as an option for providing both heat and power.

Effective liberalization of regulations should encourage private sector participation in providing infrastructure in the areas where private returns are high, thus releasing government funds for investment in the marginal areas. Investment in water resources harnessing through dam construction and rehabilitation as well as irrigation infrastructure (energy, pumps, sprinklers) should be a top priority. The priorities for government investment need to be determined and supervised at the local level to ensure that they service the needs of rural communities. The resources and responsibility should be devolved with adequate checks to reduce opportunities for rural élites to appropriate the resources and power for personal or political gain.

Improving the human resource base

Capacity to use the natural resources and the infrastructure provided underlies the success of the investment. Education and health standards declined markedly in Zimbabwe in the 1990s, particularly in rural areas. The loss of skilled health and education professionals will make it particularly difficult to regain the 1980 levels in rural and urban areas. It may be even more necessary to increase access to modern technology to fill the information and knowledge gaps and to encourage a more systematic integration of traditional and western medicine to address health. This is particularly urgent in view of the HIV and AIDS pandemic and its impact on poor rural communities.

There is a strong case for high levels of government investment in these activities directed at the poorer strata of smallholders in the poorer natural regions. Returns to such investment will be high in both growth and social equity terms since they have received so little investment in the past. The massive resettlement of small-scale commercial farmers and subsistence farmers in the higher rainfall areas, provides a strong case for the adaptation of technologies to address the needs of emerging farmers. These services are effectively public goods since they will contribute directly to economic growth and equity by providing the basis for these farmers to improve productivity. The returns to investment in commercial agriculture in the mid-twentieth century were significant and there is now a very strong case for investment in research suited to smallholder farmers in both the high and low rainfall areas as well as in newly resettled areas.

An economically viable system of providing financing for agriculture must be put in place. If resources are available, government could subsidize one-time medium to long term finance for capital expenditure. It does seem that land purchases in the meantime are being discouraged because of the politics of land reform. It is important to avoid subsidizing short-term credit to prevent

a dependency syndrome and undermining the emergence of local financial institutions. Chisvo (1998) shows that the savings club movement in Zimbabwe successfully mobilized savings in rural areas and has nurtured a savings and credit culture within rural communities while providing insurance and reciprocity in times of need. The lack of social cohesion may make this approach inapplicable in the resettlement areas. Private banks have been successful in providing small loans to cross-border traders and the success of commercialized credit in Uganda to individual rural entrepreneurs and small farmers highlights the potential for mobilizing the private sector in the provision of credit where high repayment rates reduce the costs of high overheads.

Conclusion

There is still a major role for government in promoting agricultural growth, environmental integrity and equity in Zimbabwe. The government can only provide the institutions which will encourage sustainable investment (secure and flexible property rights) and encourage competition (reduce barriers to entry and transaction costs). Once the economy begins to improve there is a need to encourage import substitution and exports, reducing inflation and increasing employment. Such investment should be targeted at those sectors that will contribute to complementing the productive sectors of the economy, including rural areas. Investment in communications infrastructure and the dissemination of market information is one strategy that will help Zimbabwe link with the global village. As government provides social services to the poorest sectors of the population through access to basic health and education, it should provide space to the well-to-do to play a role in provision of such services at a cost. Such a twin approach will help in developing the skills, information and knowledge for Zimbabwe to participate actively in the global economy.

The food crisis at the height of the land reform programme showed that the country needs global partners when natural calamities occur. The food crisis affected close to 7.2 million people in urban and communal areas and a further 1 million former farmworkers in addition to most of the farmers settled in 2002 who had inadequate seed, fertilizer and tillage to produce (FEWSNET, 2003). Zambia and Malawi are emerging as self-sufficient which may provide a source of maize imports at cheap prices for Zimbabwe. The option of continued reliance on imports of grain should not be a long-term strategy for food security in Zimbabwe as the best option is in food self-sufficiency. The long-term future of Zimbabwe would be negatively affected, however, if all policies and resources are directed to resolving food shortages. Policies and institutions should also be put in place providing incentives and opportunities for the new farmers to take advantage of globalization.

Of particular importance to agriculture is that government should ensure

that there is a high level of investment in agricultural research, extension and access to input and commodity markets. Rural development needs to broaden resource use so that communities are involved in more specialization and capture more of the multiplier effects from their activities. Government needs to expand the services offered in rural areas and invest in agro-processing, the marketing of indigenous commodities and marketing the environmental services offered locally, nationally and internationally.

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